Review of: "Not all mosquitoes are created equal: incriminating mosquitoes as vectors of arboviruses"

Licia Natal Fernandes[1]

1 Universidade de São Paulo

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The article performed a synthesis of vector competence studies carried out in different laboratories that, in total, originated 115 medical important virus – Australian mosquito associations. The article reinforces existing virus-mosquito associations and reveals variation within these associations. Also, they conclude that barriers to infection and transmission within the mesenteron and salivary glands of mosquitoes impact vector competence. This is a very important type of study once it can guide the way future vector competence studies are designed. Studies like this should be performed with mosquitoes from other localities in order to increase global vector competence understanding.

I have only a few suggestions:

-Lane 117: "…If the virus does not infect the salivary gland… ". This sentence should be rephrased in order to elucidate what happens if the virus does not infect the salivary glands and what happens if the virus is not released in the saliva during probing and/or feeding. The way it is written, one could conclude that "If the virus does not infect the salivary gland, the mosquito is considered to possess salivary gland infection", which is conflicting.

-It's not possible for me to analyse the statistical methods used. Therefore, I recommend that a statistical expert review the article to make sure the statistical methods employd are appropriate.

- Lane 603: In this paragraph, authors mention some steps that, if included in vector competence studies, could improve their results. I encourage authors to emphasize this discussion, suggesting the steps and methods future vector competence studies should not miss, in order to facilitate future syntheses like the one performed in the present study.

- Authors mention the microbiome and virome of mosquitoes as features that can impact vector competence. It would be interesting to suggest how these two variables could be included in the future vector competence studies.